

Title (en)

Organosilanes and/or Organosiloxanes for filled polyamides

Title (de)

Organosilan- und/oder Organosiloxan-haltige Mittel für gefülltes Polyamid

Title (fr)

Organosilanes et/ou organosiloxanes pour des polyamides remplis

Publication

EP 1435373 B1 20080917 (DE)

Application

EP 04101413 A 20001026

Priority

- DE 19961972 A 19991222
- EP 00123195 A 20001026

Abstract (en)

[origin: EP1435373A1] Organosilane- and/or organosiloxane-containing agents for the surface modification of fillers to be used in the production of filled polyamides have a range of compositions. Organosilane- and/or organosiloxane-containing agents for the surface modification of fillers to be used in the production of filled polyamides comprise: (a) an amino-functional silicon (Si) compound of formula (I) or a bis-aminosilane or a tert. aminosilane or a mixture of primary, secondary and/or tertiary aminosil(ox)anes obtained by hydrolysis, condensation or cocondensation of primary, secondary and/or tertiary aminosilanes, the average degree of oligomerization of the aminosiloxane being 2-20; (b) (i) an amino-functional Si compound of formula (II) and/or a secondary and/or tertiary aminosilane and (ii) an alkyl-functional Si compound of formula (III) or an alkenyl-functional Si compound of formula (IV) or a polyether-functional Si compound of formula (V) and/or (iii) optionally a content of siloxanes obtained by hydrolysis, condensation or cocondensation of compounds of formula (II), secondary or tertiary aminosilanes, bisaminosilanes or compounds of formula (III), (IV) or (V), the average degree of oligomerization of the siloxanes being 2-20; or (c) (i) an alkyl-functional Si compound of formula (III), (ii) an alkenyl-functional Si compound of formula (IV) and/or (iii) optionally a content of siloxanes obtained by hydrolysis, condensation or cocondensation of compounds of formula (III) and (IV), the average degree of oligomerization of the siloxanes being 2-20. R-NH-(CH₂)₃-Si(CH₃)_x(Z)_{3-x} (I) R'-Si(CH₃)_x(Z)_{3-x} (II) R₁-Si(CH₃)_x(Z)_{3-x} (III) CH₂=CH-(CH₂)_n-Si(CH₃)_x(Z)_{3-x} (IV) R''-(O-CH₂-CHR''')_{n'}-O-(CH₂)_m-Si(CH₃)_x(Z)_{3-x} (V) Z = 1-3C alkoxy, OH or Cl; x = 0 or 1; R = 1-20C alkyl, 5-12C cycloalkyl or 6-20C aryl; R' = an amino group of formula H₂N-((CH₂)₂NH)_y-(CH₂)₃- with y = 0, 1 or 2; R₁ = optionally cyclic, optionally fluorinated 1-16C alkyl; n = 1-20; R'' = 1-4C alkyl; R''' = H or methyl; m = 2 or 3; and n = 5-20.

IPC 8 full level

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C-Set (source: EP US)

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